

NHS Lanarkshire

Local Report ~ *May 2008*

# **Blood Transfusion**



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NHS Quality Improvement Scotland (NHS QIS) is committed to equality and diversity. We have assessed the performance assessment function for likely impact on the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. For this equality and diversity impact assessment, please see our website ([www.nhshealthquality.org](http://www.nhshealthquality.org)). The full report in electronic or paper form is available on request from the NHS QIS Equality and Diversity Officer.

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# 1 Setting the scene

NHS Quality Improvement Scotland (NHS QIS) was set up by the Scottish Parliament in 2003 to take the lead in improving the quality of care and treatment delivered by NHSScotland. NHS QIS does this by setting standards and monitoring performance, and by providing NHSScotland with advice, guidance and support on effective clinical practice and service improvements.

The Scottish National Blood Transfusion Service (SNBTS) is responsible for collecting, processing, storing and supplying all blood and blood components in Scotland and NHS boards are responsible for ordering and managing their supplies in a safe and effective manner. The Scottish Executive introduced a programme of work to improve and support transfusion practice in Scotland and, as a consequence, NHS QIS appointed a project group to develop clinical standards for blood transfusion practices. The project group developed four standards, covering: core principles; clinical management – pre-transfusion; clinical management – hospital transfusion laboratory; and clinical management – blood and blood component collection, administration and monitoring. The Clinical Standards for Blood Transfusion were published in September 2006. These include details of the project group which set the standards and are available on request from NHS QIS or can be downloaded from the website ([www.nhshealthquality.org](http://www.nhshealthquality.org)).

## About this report

This report presents the findings from the peer review of NHS Lanarkshire's performance against the blood transfusion standards.

The review process has three key phases: preparation prior to the visit; the visit; and the report production and publication following the visit. (See flow chart in Appendix 2 for further detail.) During the visit, each multidisciplinary review team assesses performance using the categories 'met', 'not met' and 'not met (insufficient evidence)', as detailed below.

- **'Met'** applies where the evidence demonstrates the standard and/or criterion is being attained.
- **'Not met'** applies where the evidence demonstrates the standard and/or criterion is not being attained.
- **'Not met (insufficient evidence)'** applies where no evidence is available for the review team, or where the evidence available is insufficient to allow an assessment to be made.

A final category **'not applicable'** is used where a standard and/or criterion does not apply to the NHS board under review.

Each review team is led by an experienced reviewer, who is responsible for guiding the team in their work and ensuring that team members are in agreement about the assessment reached. Membership of the review team visiting **NHS Lanarkshire on 21 February 2008** can be found in Appendix 3.

## 2 Summary of findings

### 2.1 Overview of local service provision

Lanarkshire is situated in central Scotland and has a population of around 558,139<sup>1</sup>. The majority of the population live in urban areas, of which Cumbernauld, Hamilton and Motherwell are the largest in the region.

#### Local NHS system and services

Lanarkshire NHS Board is responsible for improving the health of the local population and for the delivery of the healthcare required. It provides strategic leadership and has responsibility for the efficient, effective and accountable performance of the NHS in Lanarkshire.

At the time of the review visit, NHS Lanarkshire provided acute, primary and community services throughout its division which covers a geographical area of Cumbernauld to Clydesdale. Transfusion procedures are carried out in three areas within NHS Lanarkshire: Wishaw General Hospital, which covers the maternity and neonatal units for Lanarkshire; Hairmyres Hospital, East Kilbride; and Monklands Hospital, Airdrie.

Further information about the local NHS system can be accessed via the website of NHS Lanarkshire ([www.show.scot.nhs.uk/nhslanarkshire](http://www.show.scot.nhs.uk/nhslanarkshire)).

NHS Lanarkshire has three blood bank laboratories based in Monklands Hospital, Wishaw General Hospital and Hairmyres Hospital. NHS Lanarkshire blood bank laboratories are supplied with blood and blood components by West of Scotland BTS (WOSBTS) based in Glasgow.

In the 12 months prior to the review visit, approximately 18,343 red blood cell units were transfused in NHS Lanarkshire.

The NHSScotland Better Blood Transfusion Programme (BBTP) is supported by two part-time transfusion practitioners.

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<sup>1</sup> General Register Office for Scotland. Mid-2006 Population Estimates Scotland: Population Estimates by Age and Sex and Administrative Area. First published on 26 April 2007. Revised 27 July 2007. Available from: <http://www.gro-scotland.gov.uk/files>

## **2.2 Summary of findings against the standards**

A summary of the findings from the review is presented in this section. A detailed description of performance against the standards/criteria is included in Section 3.

### **Core principles**

The multidisciplinary Lanarkshire hospital transfusion committee (LHTC) was established in 2003 and is accountable to the NHS Lanarkshire board. The LHTC acts as an overarching body for three local hospital transfusion committees (HTCs) based at Monklands Hospital, Hairmyres Hospital and Wishaw General Hospital. The LHTC is supported by the hospital transfusion team (HTT).

There was good evidence of multidisciplinary audit being carried out across the board area. Local audits are overseen by the overarching LHTC, other audits are initiated by the LHTC in order of priority. There are mechanisms in place to ensure audit information is shared with appropriate staff groups. Changes in practice as a result of audit outcome were implemented.

The established HTT leads the implementation of the BBTP to increase the knowledge of staff working in the hospital blood transfusion service. The transfusion practitioners are responsible for delivering the BBTP and provide feedback to local HTCs and the overarching LHTC on current work and training activity. The BBTP is a standing agenda item on all four HTCs.

There are procedures in place for recording and reporting of critical incidents within NHS Lanarkshire, and these are monitored and investigated. All serious adverse events and near miss incidents relating to blood transfusion practice within NHS Lanarkshire are submitted and reviewed by Serious Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative. All adverse events and near miss incidents are reported to the risk management director and the clinical risk group through the board-wide DATIX reporting system. All local incidents are discussed in detail at local HTCs and escalated to the LHTC as appropriate.

NHS Lanarkshire uses the 'bag and tag' system that ensures every unit of blood or blood component received into the laboratories is traceable from pre-transfusion to its final fate. Traceability documentation is maintained by controlled staff access and is securely stored in paper and electronic form for 30 years.

At the time of the review visit, a new NHS Lanarkshire patient identification protocol was out for consultation. This revised policy includes the use of gender which is not currently used at every stage of the blood transfusion process.

### **Clinical management – pre-transfusion**

The team was informed that there is a system in place to discuss with patients treatment options and alternatives to transfusion. However, at the time of the review visit, there was insufficient evidence to confirm the system was being conformed to. This issue is being addressed by the implementation of a revised version of the

transfusion care pathway which will include a tickbox to prompt staff that a discussion has taken place.

Staff also reported that junior medical staff are not always aware of the need to document pre and post blood transfusion discussions with patients, however, through the transfusion care pathway, compliance is expected to be achieved and evidenced through audit in the future.

There is a wide range of leaflets and information available to patients explaining the risks and benefits of blood transfusion. Leaflets are available in all ward areas, rest rooms, waiting rooms and the accident and emergency (A&E) department.

In emergency situations when pre-transfusion discussion is not possible, A&E staff ensure that measures are taken to try and establish the identity of the patient by checking their personal belongings. Hospital notes are also checked for advance directives to ensure individual choices of patients regarding blood transfusion options are respected where possible.

### **Clinical management – hospital transfusion laboratory**

All transfusion laboratories within NHS Lanarkshire are accredited by Clinical Pathology Accreditation (UK) Ltd (CPA) and have Medicines and Healthcare products Regulatory Agency (MHRA) approval.

NHS Lanarkshire has a competency-based training assessment system in place and training records are maintained in all three laboratories.

There are good stock management systems at each of the three blood bank laboratories within NHS Lanarkshire. Protocols are in place to support the maintenance of emergency use of O RhD negative blood. Stock levels are agreed with SNBTS. Monthly wastage rate reports are issued by the Scottish regional blood transfusion centre to ensure wastage rate levels are monitored.

### **Clinical management – blood and blood component collection, administration and monitoring**

There was evidence of theory and practical training being undertaken across the board area. The majority of the BBTP is delivered by the transfusion practitioners with the assistance of transfusion trainers in some areas. The review team noted as a challenge for the board the need to engage senior medical staff groups in theoretical and competency-based training programmes. An action/implementation plan has been developed to accurately assess the current training needs of staff employed within NHS Lanarkshire.

Recording the minimum identification data set to include gender as a requirement on all transfusion documentation is being addressed through the recently drafted NHS Lanarkshire patient identification protocol.

Staff are aware of the need to observe and monitor patients' vital signs during the time of receiving a blood transfusion, and there are policies in place to support staff

to recognise transfusion reactions and to report adverse incidents. However, an audit of documentation relating to blood transfusion found intermittent observations were not being recorded. Transfusion practitioners are targeting all nursing staff through knowledge sharing sessions and the staff newsletter to reinforce the correct procedures for patient monitoring.

The board provided the review team with good evidence of procedures used to record and report near miss incidents and serious adverse blood reactions to SABRE and SHOT.

### 3 Detailed findings against the standards

#### Standard 1a: Core Principles

##### **Standard Statement**

*There are systems in place supporting clinical governance to ensure safe, effective and appropriate blood transfusion.*

**NHS Lanarkshire**

##### **Essential Criteria**

*1a.1: There is an established, active, multidisciplinary hospital transfusion committee (HTC) that has defined responsibilities and accountability to the chief executive/NHS board via the clinical governance structure.*

##### **STATUS: Met**

The multidisciplinary LHTC established in 2003 acts as an overarching body for three local HTC's based at Monklands Hospital, Airdrie, Wishaw General Hospital and Hairmyres Hospital, East Kilbride. The role of the LHTC is to standardise practice and to encourage partnership working collectively across the three sites. The four hospital transfusion committees (HTCs) meet quarterly on a pre-arranged basis.

The LHTC membership includes the chairs from the three local HTC's who feedback on information from each of the three individual sites.

There is a clear reporting structure that shows the overarching LHTC is responsible to the NHS Lanarkshire board. Information from the LHTC is fed into various forums depending on relevance, and these forums extend to the acute clinical board, health and clinical governance committee, audit committee and finally the NHS Lanarkshire board. The review team was informed that in order to maintain and improve attendance at the three local HTC meetings, members had been asked to designate deputies to attend the meetings in their absence.

Blood transfusion incident reporting is a standing item on the LHTC and three local HTC meeting agendas. The LHTC and the three local HTC's have clearly defined documented and approved remits that outline responsibilities and accountabilities.

*1a.2: The HTC has roles and responsibilities as outlined in MEL(1999)9 and HDL(2003)19. These include involvement in multi-professional audit, education and training, development and modification of guidelines and protocols, and involvement of stakeholders.*

##### **STATUS: Met**

Local audits are performed on a site-specific basis. All local audits are overseen by the overarching LHTC. Other audits are initiated by the LHTC through prioritisation

and individual leads are identified by specialty to undertake audits. The review team noted evidence of considerable audit related to blood transfusion and new practice implementation following outcomes from these audits. For example, the May 2007 maximum surgical blood ordering schedule (MSBOS) audit was undertaken over a 6-month period and in consultation with thoracic surgeons, appropriate blood ordering levels were agreed. Audit is now a standing item for discussion on the overarching LHTC agenda.

The board's LHTC liaises with relevant speciality groups to feedback audit findings; this includes reporting to the risk management group.

All existing policies include review dates, and are approved by the LHTC and ratified by the appropriate management group. Document control is in place board-wide in NHS Lanarkshire; staff use sign-off lists to confirm they have read the document and the sign-off list is then endorsed by the ward manager.

To ensure all staff are aware of the introduction of new/revised documentation a staff brief is emailed to all board staff. Paper copies of the new/updated documents are available in all relevant areas and copies are uploaded and accessible on the intranet.

*1a.3: The HTC, in collaboration with the clinical governance committee, implements the NHSScotland Better Blood Transfusion Programme (BBTP).*

#### **STATUS: Met**

NHS Lanarkshire has an established hospital transfusion team (HTT) that leads the implementation of the NHSScotland Better Blood Transfusion Programme (BBTP). Membership of the HTT includes the lead clinician for haematology, a transfusion co-ordinator and two transfusion practitioners.

The transfusion co-ordinator's remit within the HTT is to liaise with the three laboratories to encourage standardisation of transfusion laboratory practice across NHS Lanarkshire. The co-ordinator visits each of the three laboratories on a weekly basis, to maintain good communication between laboratory staff and local HTCs.

Members of the HTT provide feedback to the HTCs on current work activity, which includes the BBTP and reporting on progress from outstanding HTC actions. The HTT meets monthly or more frequently as required to ensure actions are taken forward. The HTT meetings are not formally minuted. However, staff reported that notes of these meetings are recorded by a transfusion practitioner who then disseminates agreed actions via email to other members of the group. The BBTP is a standing item on all four HTC meeting agendas.

*1a.4: The HTC reviews all reports of adverse events and near miss incidents relating to blood transfusion and, in response, implements changes in practice where necessary.*

**STATUS: Met**

All adverse events and near miss incidents relating to blood transfusion are discussed at local HTC meetings and escalated to the overarching LHTC where appropriate. An example of an adverse event involved the issue of O RhD negative blood. The transfusion practitioner was informed by both ward and laboratory staff that the incident had occurred. The transfusion practitioner carried out an investigation and reported the findings to the HTC. As a result of this adverse event, retraining of staff was initiated and the creation of a flow chart for the use of O RhD negative blood was implemented in appropriate ward areas.

All adverse events are reported to the risk management director and the clinical risk group through DATIX (a computerised risk management reporting system) which is in use board-wide.

Identified adverse events or incidents are also highlighted in the staff newsletter.

## Standard 1b: Core Principles

### Standard Statement

*The NHS board has a system in place to ensure that every unit of blood component received into the hospital transfusion laboratory can be unmistakably traced to its recipient, or to its final fate if not transfused.*

### NHS Lanarkshire

### Essential Criterion

*1b.1: There is a validated system to ensure that evidence of unmistakable traceability is generated, stored and accessible for 30 years.*

### STATUS: Met

Each of the three laboratories in NHS Lanarkshire has individual standard operating procedures (SOPs) in place to provide staff with guidance on blood transfusion traceability. All three laboratories use the 'bag and tag' system which issues a traceability label from the pre-transfusion stage and is tracked throughout the journey of the blood unit until its return to the laboratory to confirm transfusion of the blood to the patient. The returned section of the traceability label is securely stored both in paper and electronic form for the recommended period of 30 years in all three sites.

Each of the three laboratories is responsible for auditing tag returns. A daily reconciliation process in each laboratory identifies unreturned traceability labels and follow-up action is taken after a maximum period of 48 hours. Designated medical laboratory assistants (MLAs) track down missing tags on a daily basis by discussing outstanding tags with ward staff and searching ward areas.

The review team commended NHS Lanarkshire on its traceability system.

## Standard 1c: Core Principles

### Standard Statement

*There is a robust system in place to establish patient identification details and maintain this at every stage of the clinical transfusion process.*

### NHS Lanarkshire

### Essential Criteria

*1c.1: The minimum identification data set (surname, forename, sex, date of birth and unique identification number, eg Community Health Index [CHI]) is used at every stage of the clinical transfusion process to positively identify the patient.*

### STATUS: Not met

At the time of the review visit, not all NHS Lanarkshire's written procedures for blood and blood component transfusion detailed gender recording at every stage of the blood transfusion process. The recently drafted NHS Lanarkshire patient identification protocol includes gender as part of the minimum data set, therefore, the issue of gender will be addressed once this protocol is ratified and implemented across NHS Lanarkshire. All training literature will also be updated to reflect the inclusion of gender.

Staff involved in the blood transfusion process are required to undertake BBTP training which includes reference to ensuring positive patient identification. A wristband audit carried out in November 2007 confirmed high compliance across NHS Lanarkshire of patients wearing wristbands, however, patient identification did not include gender.

The review team noted that the wristband protocol had been reviewed to include gender as part of the minimum data set, and this has been distributed for consultation and final comment. Once agreed, the protocol will be implemented across NHS Lanarkshire, and all staff will be required to sign to confirm they have read it. The wristband protocol is to be included in the senior nurses' annual audit programme.

While the board uses the four unique identifiers as described in the British Committee for Standards in Haematology Guidelines (2004), the omission of gender at each stage of the transfusion process means that the board narrowly failed to meet the standard criterion.

*1c.2: All patients must be identifiable at all times. Inpatients and day patients must wear an identification wristband. If the wristband becomes inaccessible for any reason, an alternative, risk-assessed form of identification is adopted immediately.*

**STATUS: Not met**

The newly drafted NHS Lanarkshire patient identification protocol states that patients receiving a blood transfusion must wear an identity band at all times. If the patient is not wearing a wristband they would not be transfused. A wristband audit carried out in November 2007 showed high compliance across NHS Lanarkshire of patients wearing wristbands, however, if the wristband becomes inaccessible for any reason, there is no formal alternative risk-assessed form of identification available. A business case has been submitted to request implementation of an electronic blood tracking system which incorporates all aspects of safe patient identification and will ensure compliance with the UK blood safety and quality regulations (2005) and NHS HDL(2005)25.

Staff reported that, in theatre, if the wristband is likely to be covered by drapes, the wristband would be removed and a new wristband applied to either the patient's ankle or taped onto the shoulder as defined in the theatre patient identification SOP.

*1c.3: There is a system (eg distinctive wristbands) to alert qualified practitioners to patients who have specific transfusion requirements, including the wish to not be transfused.*

**STATUS: Met**

Throughout NHS Lanarkshire, clinical staff are responsible for ensuring patients who do not wish to receive a blood transfusion are identified. Details of patients' requests, including advance directives, would be documented and filed in the front of the patients' casenotes. Staff are aware of the need to check the notes before any treatment would be administered and this system is documented in all relevant policies.

The review team was informed that a red wristband is used across NHS Lanarkshire to alert staff to refer to the patient's casenotes for information regarding specific known allergies. Senior nursing staff were consulted regarding the possibility of using red wristbands to identify patients with special transfusion requirements, including patients of the Jehovah's Witness faith. This was refused on the basis that red wristbands were only to be used to identify patients with known allergies.

In maternity services, blood transfusion is discussed with women at an early antenatal clinic appointment and the discussion and wishes of the individual are documented in the casenotes. The NHS Lanarkshire Jehovah's Witness protocol outlines actions to be taken if a patient refuses certain interventions. The current NHS Lanarkshire policy for consent to treatment, surgery and invasive procedures refers to general

consent forms and special consent forms for specific procedures including objections to transfusion of blood and blood products.

*1c.4: For patients whose identity cannot be confirmed (eg unconscious patients or patients with communication difficulties), a minimum of gender and one unique identifier (eg accident and emergency number or CHI number) is essential for positive patient identification.*

#### **STATUS: Met**

The NHS Lanarkshire identification of unknown emergency patients policy includes guidance for staff on how to manage unidentified patients admitted to the accident and emergency (A&E) department. The procedure notes a patient would be allocated a unique A&E number, for example 'unknown male one' or 'unknown female one', the patient would also be given a 'not known' date of birth. Once a patient's identity is known, the unique A&E number would be merged with the patient's hospital number.

Formal policies are in place to assist staff when identifying patients with communication difficulties. Translation services are used and are easily accessed in NHS Lanarkshire to support communication and establish patient identification details where appropriate. However, at the time of the review visit, it was noted that Monklands Hospital did not have a formal interpretation policy in place, but reported that when translation services were required, an email would be sent to seek support with specific language requirements.

The review team encouraged the board to consider formalising translation policies across NHS Lanarkshire and to ensure 24-hour translation access is available.

## Standard 1d: Core Principles

### Standard Statement

*The NHS board has a strategy for management of blood shortages.*

### NHS Lanarkshire

### Essential Criterion

*1d.1: Emergency blood management arrangements (EBMA) are established as defined in HDL(2005)25.*

### STATUS: Met

NHS Lanarkshire has an emergency blood management arrangements (EBMS) policy in place and an established emergency blood management group has met on three occasions to date where EBMA were agreed.

The review team commended the board on its EBMA policy which includes guidance for the use of platelet and plasma products.

## Standard 2a: Clinical Management – Pre-Transfusion

### Standard Statement

*The decision to transfuse is made following consideration of the potential risks and benefits of, and the alternatives to, transfusion. Where possible this is discussed between the clinician and patient (or their legal guardian) in advance of transfusion.*

### NHS Lanarkshire

### Essential Criteria

*2a.1: The patient's records contain evidence that the reason for transfusion of blood or blood components has been explained and discussed with the patient. This includes discussion of valid alternatives to transfusion and the option to refuse.*

### STATUS: Not met (insufficient evidence)

Staff involved in the blood transfusion process are aware of the need to ensure that patients' casenotes must contain evidence that the reason for transfusion of blood or blood components has been explained and discussed. These discussions should also include valid alternatives to transfusion and the option to refuse. A small maternity services audit carried out in January 2008 showed high compliance that individual women's notes contained clearly recorded detail of informed consent.

However, elsewhere, although staff assured the review team that discussions do take place, NHS Lanarkshire was unable to provide documented evidence to confirm compliance with this standard criterion. Staff also reported that junior medical staff are not always aware of the need to document discussions, however, through the implementation of the revised transfusion care pathway which includes a tickbox to document that a discussion has taken place, compliance is expected to be achieved and evidenced through audit of the revised transfusion care pathway in the future.

*2a.2: Leaflets explaining the risks and benefits of, and alternatives to, transfusion are readily available for patients who may require to be, or have been transfused.*

### STATUS: Met

Information leaflets are freely available in ward areas, rest rooms, waiting rooms and A&E. Leaflets are given to patients likely to need a blood transfusion. The maternity audit carried out in January 2008 showed poor compliance with this procedure, however, staff reported that offering a leaflet is routinely part of the discussion with all pregnant women, but it is not always documented when they decline the offer. The first audit of the newly implemented transfusion care pathway confirmed that the information leaflet tickbox was not always ticked, however, staff noted that in cases where the patient did not accept a leaflet then staff left the tickbox blank. A second audit has shown marked improvement following staff awareness of the need to record if a patient had declined a leaflet. The transfusion care pathway document

also notes that a leaflet is to be provided at the time of decision to transfuse. In addition to the transfusion care pathway, NHS Lanarkshire is introducing patient-held record diaries that will contain general information about transfusion and will include a section to document all transfusions received by the patient. In the first instance, these diaries will focus on haematology patients who receive regular transfusions.

*2a.3: Where pre-transfusion discussion is not possible (eg in an emergency) there is a system, compatible with the patient's clinical needs, to investigate and act in accordance with the patient's treatment preferences. This includes compliance with an advance decision document.*

#### **STATUS: Met**

In emergency situations when a patient may be admitted to hospital unconscious, A&E staff ensure that measures are taken to try and establish the identity of the patient by checking their personal effects and noting any distinguishing features. Details of the patient may be passed to the police to try and confirm/check identification of the patient. The unconscious patient would be given a unique identification number, for example unknown male one or unknown female one, date of birth unknown plus approximate age would be noted on the wristband, until such time as positive patient identification is known.

*2a.4: When pre-transfusion discussion has not taken place, the reasons for transfusion (based on risks and benefits) are discussed with the patient and written information offered retrospectively.*

#### **STATUS: Not met (insufficient evidence)**

When pre-transfusion discussion has not taken place, a retrospective discussion explaining the reasons for transfusion, based on risks and benefits, between the patient and the senior house officer and an information leaflet would be offered at this time. Details of these discussions would be recorded in the patient's casenotes. However, although the transfusion manual makes reference to ensuring a retrospective discussion takes place, at the time of the review visit, there was no evidence to support compliance with this standard criterion. Staff informed the review team that obstetric patients' discharge letters to general practitioners (GPs) include information if a patient has received a blood transfusion, however, hospital staff are unsure if GPs pass this information on to the patient.

Transfusion practitioners reported that highlighting the importance of retrospective discussions in all medical staff training practices will be taken forward. The revised version of the transfusion care pathway will also reflect this.

## Standard 2b: Clinical Management – Pre-Transfusion

### Standard Statement

*Positive patient identification at the time of sampling and the use of a minimum identification data set on samples and request forms is essential for pre-transfusion testing and blood component requests.*

NHS Lanarkshire

### Essential Criterion

*2b.1: Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols, which are based on national guidelines.*

**STATUS: Not met**

NHS Lanarkshire has procedures in place for obtaining and labelling blood samples. However, as the patient's wristband does not include gender as part of the minimum identification data set, cross checks to confirm positive patient identification against the wristband and documentation mean the board has narrowly failed to meet this standard criterion.

## Standard 2c: Clinical Management – Pre-Transfusion

### Standard Statement

*Blood and blood component prescribing is the responsibility of a qualified practitioner.*

### NHS Lanarkshire

### Essential Criteria

*2c.1: All prescriptions for blood and blood components are signed by a qualified practitioner.*

### STATUS: Met

The interim report from the second compliance audit of the NHS Lanarkshire transfusion care pathway for transfusion of a blood component (November 2007) recorded full compliance showing all prescriptions for blood and blood components were being signed by a qualified practitioner.

*2c.2: Blood and blood component prescriptions specify: blood component to be administered; number of units (millilitres in paediatric patients) to be transfused; duration of transfusion; any special requirements; and any special instructions.*

### STATUS: Not met

At the time of the review visit, the transfusion care pathway for transfusion of a blood component did confirm that blood and blood component prescriptions did specify: blood component to be administered; number of units to be transfused; duration of transfusions; any special requirements; and special instructions. However, audit data confirmed that not all patients had special requirements documented. The review team was informed that the revised transfusion care pathway documentation is to be reviewed to ensure that staff are adequately prompted to record special blood transfusion requirements. In addition, the board has developed an algorithm flow chart for haematology patients receiving special blood products. The flow chart is used in all relevant ward areas and clearly states that once special requirements are established, they must be indicated on all transfusion request forms and all transfusion care pathways.

The board has narrowly failed to meet this standard criterion as audit data provided at the time of the review visit confirmed that not all patients had special requirements documented.

## Standard 3a: Clinical Management – Hospital Transfusion Laboratory

### Standard Statement

*Laboratory operations comply with current regulatory requirements.*

NHS Lanarkshire

### Essential Criteria

*3a.1: All transfusion laboratories within the NHS board are accredited by Clinical Pathology Accreditation (UK) Ltd (CPA) or equivalent and are compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.*

#### STATUS: Met

NHS Lanarkshire has three blood bank laboratories. All three laboratories are accredited with Clinical Pathology Accreditation (UK) Ltd (CPA) and are fully compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.

NHS Lanarkshire commissions services for NHS patients from Glasgow Nuffield Hospital and BMI Ross Hall Hospital, Glasgow. The blood bank laboratories in Glasgow Nuffield Hospital and Ross Hall Hospital are also CPA accredited and compliant with the requirements of the MHRA.

*3a.2: Competency-based training and assessment systems are in place and training records are maintained.*

#### STATUS: Met

Good training programmes for laboratory staff are in place at each of the three hospital blood bank laboratories and signed individual training records are held in each laboratory. All laboratory staff are encouraged to undertake BBTP training online as part of their overall performance development plan (PDP).

## Standard 3b: Clinical Management – Hospital Transfusion Laboratory

### Standard Statement

*Procedures are in place to optimise blood use and minimise wastage.*

### NHS Lanarkshire

### Essential Criteria

*3b.1: Protocols endorsed by the HTC are in place, including but not limited to: the maximum surgical blood ordering schedule (MSBOS); massive blood loss; major incidents; and emergency blood management arrangements.*

### STATUS: Met

Local procedures are in place throughout NHS Lanarkshire to optimise blood use and minimise blood wastage. Protocols for massive blood loss and EBMA are in place. Laboratory staff are asked to review and provide feedback on relevant sections of these protocols and procedures before a document is finalised and sent to the HTC for approval and final ratification by the relevant management group.

*3b.2: There is a stock management system to eliminate excess inventory and reduce waste, supported by an information technology (IT) system.*

### STATUS: Met

There are stock management systems in place at all three blood bank laboratories across NHS Lanarkshire. Protocols for the emergency issue of O RhD negative red cells are also in place. Four units of O RhD negative blood are held in the matched blood fridge of Wishaw General Hospital. Hairmyres Hospital transfusion laboratory holds four units of O RhD negative blood in a designated area of the main stock fridge. Four units of O RhD negative blood are available in the matched blood fridge of Monklands Hospital. The satellite fridge in the maternity unit of Wishaw General Hospital has been temporarily decommissioned.

Stock levels are set in conjunction with weekly use and activity in order to avoid over stocking and wastage. Monthly blood component transaction reports are issued by West of Scotland BTS (WOSBTS) to ensure wastage rates are monitored.

There is an information technology (IT) system in place that supports blood stock management and provides a full audit trail of all blood stock electronically scanned onto the system.

*3b.3: In collaboration with clinical specialties, laboratory staff participate in audit of transfusion issues.*

**STATUS: Met**

There was good evidence of NHS Lanarkshire's involvement in multidisciplinary local and national audit projects. Feedback on audit findings is provided to all appropriate staff groups.

## Standard 4a: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

### Standard Statement

*Positive patient identification is performed against the blood component and any accompanying documentation at every stage of the clinical transfusion process.*

### NHS Lanarkshire

### Essential Criteria

*4a.1: Only staff who have completed the BBTP continuing education programme (or equivalent) appropriate to their role can participate in the clinical transfusion process.*

### STATUS: Not met

NHS Lanarkshire staff are aware that only those who have undertaken the BBTP training are permitted to participate in the handling of blood and blood components.

Ward managers are responsible for ensuring all staff have completed the BBTP Level 1: Safe Transfusion Practice training. Staff requiring revalidation are being encouraged to undertake online BBTP Level 1 training (OrasGold™) BBTP Level 1 training is compulsory for all foundation year one (FY1) junior doctors, as it is a requirement of the General Medical Council (GMC) registration. Staff reported that efforts are made to ensure that as many staff as possible receive BBTP training at induction. In Wishaw General Hospital, newly appointed porters shadow existing porters until they are able to demonstrate competency in the collection and movement of blood. In Monklands Hospital, porters are trained by the transfusion practitioners and in Hairmyres Hospital, porters are trained by laboratory staff. NHS Lanarkshire is participating in the national BBTP pilot for competency-based assessment, related to the blood collection component only.

Significant challenges have been identified in the low number of medical staff other than FY1s participating in theoretical training and competency-based assessment. An action/implementation plan has been developed to identify staff numbers across NHS Lanarkshire, which will allow the board to consolidate training statistics and objectives. This exercise is being led by the transfusion practitioners with support from ward managers and includes senior medical staff training requirements.

The review team commended the board for its high number of non-medical staff trained in the BBTP.

*4a.2: The minimum identification data set is recorded on all transfusion documentation (see standard criterion 1c.1).*

**STATUS: Not met**

At the time of the review visit, the board did not include gender in all written procedures for blood and blood component transfusion documentation for every stage of the blood transfusion process. The recently drafted NHS Lanarkshire patient identification protocol includes gender as part of the minimum data set. This protocol will be ratified and implemented across NHS Lanarkshire.

Staff reported that a wristband re-audit will be undertaken in summer 2008 to demonstrate compliance with patients wearing wristbands and to check that gender is being recorded.

## Standard 4b: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

### Standard Statement

*Patients are monitored for any adverse events or reactions during and after the transfusion process as clinically indicated.*

NHS Lanarkshire

### Essential Criteria

*4b.1: Patients are monitored according to hospital transfusion policy and any untoward events (including suspected adverse reactions) are immediately clinically managed and promptly reported to the HTL.*

### STATUS: Not met

A transfusion care pathway audit undertaken in November 2007 showed that patients are monitored for any adverse reactions during and after the transfusion process as clinically indicated. However, an audit of the completeness of documentation relating to transfusion observations found that 15 minute and hourly observations were not always being documented. Reinforcement of correct procedures for patient monitoring to all nursing staff through knowledge sharing sessions and the staff newsletter has been recommended by the transfusion practitioners who will continue to audit compliance with this standard criterion.

*4b.2: Serious adverse events and near miss incidents are reported on the clinical incident reporting system in accordance with local protocols.*

### STATUS: Met

Any serious adverse events and near miss incidents relating to blood transfusion which occur in clinical areas of NHS Lanarkshire are entered into DATIX as appropriate by the staff member responsible for recording the incident. On notification of a reaction, laboratory staff would issue a transfusion reaction form to the ward, and the on call haematologist and transfusion practitioner are informed. All incidents are discussed at local HTC meetings and where appropriate are reported to the LHTC. Incidents are investigated using the root cause analysis methodology by designated staff and findings are reported and disseminated to all relevant managers.

*4b.3: Reports of serious adverse events or reactions and near miss incidents are submitted to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative by the relevant staff.*

**STATUS: Met**

There are designated individuals in each of the three transfusion laboratories who are responsible for reporting serious adverse events or reactions and near miss incidents to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative.

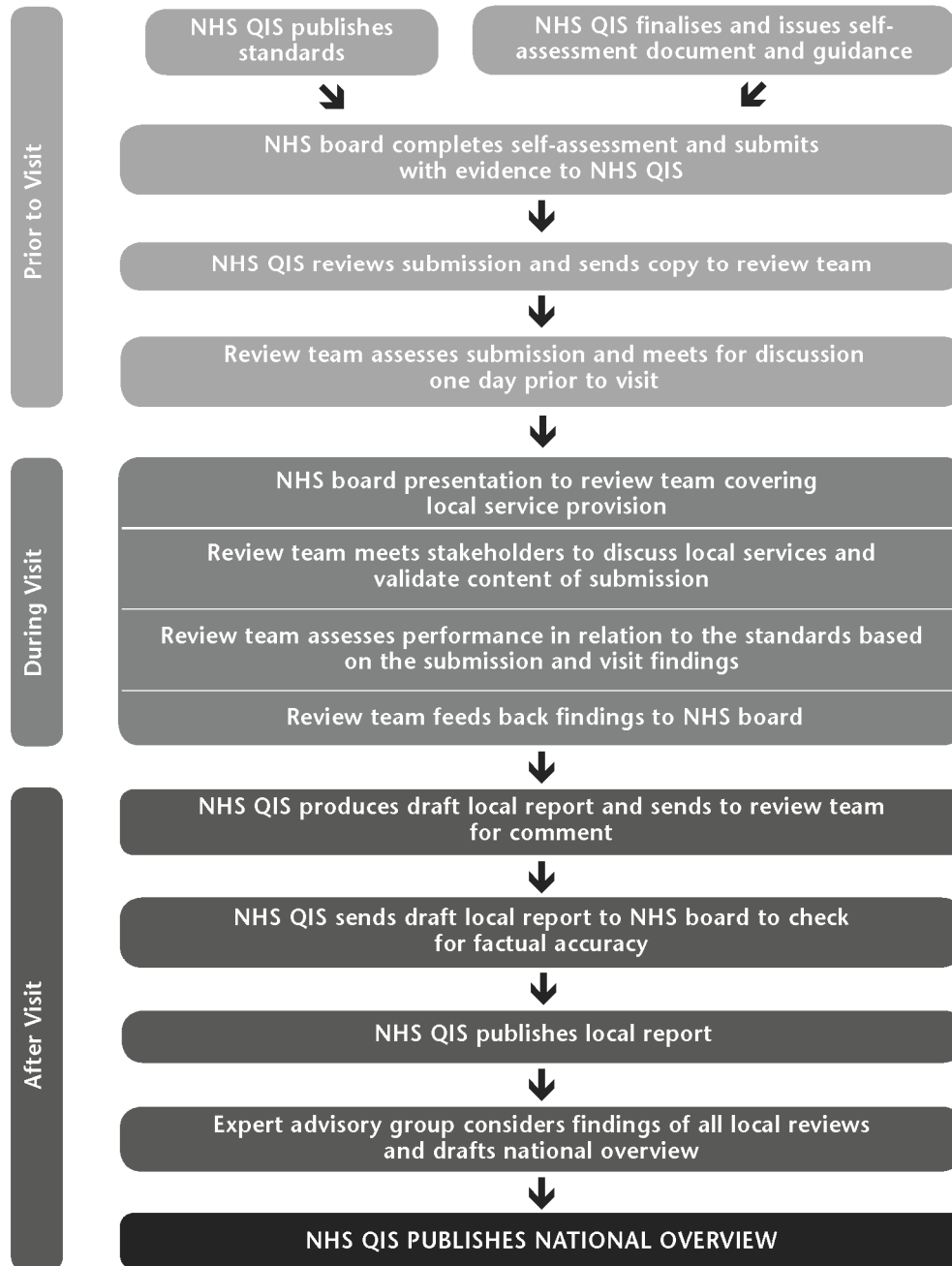
## Appendix 1 – Glossary of abbreviations

### Abbreviation

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<b>A&amp;E</b>	accident and emergency
<b>BBTP</b>	Better Blood Transfusion Programme
<b>BCSH</b>	British Committee for Standards in Haematology
<b>CPA</b>	Clinical Pathology Accreditation (UK) Ltd
<b>EBMA</b>	emergency blood management arrangements
<b>FY1</b>	first year 1
<b>GMC</b>	General Medical Council
<b>GP</b>	general practitioner
<b>HTL</b>	hospital transfusion laboratory
<b>HTT</b>	hospital transfusion team
<b>IT</b>	information technology
<b>LHTC</b>	Lanarkshire hospital transfusion committee
<b>MHRA</b>	Medicines and Healthcare products Regulatory Agency
<b>MLA</b>	medical laboratory assistant
<b>MSBOS</b>	maximum surgical blood ordering schedule
<b>NHS QIS</b>	NHS Quality Improvement Scotland
<b>ORAS</b>	online recording and assessment system
<b>PDP</b>	performance development plan
<b>SABRE</b>	Serious Adverse Blood Reactions and Events
<b>SHOT</b>	Serious Hazards of Transfusion
<b>SNBTS</b>	Scottish National Blood Transfusion Service
<b>SOP</b>	standard operating procedure
<b>WOSBTS</b>	West of Scotland BTS

## Appendix 2 – Review process



## Appendix 3 – Details of review visit

The review visit to NHS Lanarkshire was conducted on 21 February 2008.

### Review team members

**Dr Fiona Cutler (Team Leader)**

Consultant Haematologist, NHS Ayrshire & Arran

**Ms Pamela Irving**

Clinical Nurse Specialist, NHS Tayside

**Miss Karen Smith**

Clinical Biochemist, NHS Ayrshire & Arran

**Mr Ian Stephenson**

Biomedical Scientist, Member of the Project Group

**Mrs Maureen Summers**

Public Partner, Grampian

### NHS Quality Improvement Scotland Staff

**Mrs Morag Kasmi**

Senior Project Officer

**Ms Angela Sutherland**

Project Officer

**Mrs Susan McGaff**

Project Administrator (Observer)

During the visit, members of the review team met with consultant and nursing staff, transfusion laboratory staff, transfusion practitioners and support staff from across the NHS board area.

The composition of each team varies, and members have no connection with the NHS board they are reviewing. Both of these factors facilitate the sharing of good practice across NHSScotland, and ensure that each review team assesses performance against the standards rather than make comparisons between one NHS board and another. The team remit does not include reviewing the work of individual healthcare professionals, variations in practice (and potential quality) within a service will be encountered and subsequently reported.



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## **NHS Quality Improvement Scotland**

Edinburgh Office  
Elliott House  
8-10 Hillside Crescent  
Edinburgh EH7 5EA

Phone: 0131 623 4300  
Textphone: 0131 623 4383

Email: [comments@nhshealthquality.org](mailto:comments@nhshealthquality.org)  
Website: [www.nhshealthquality.org](http://www.nhshealthquality.org)

Glasgow Office  
Delta House  
50 West Nile Street  
Glasgow G1 2NP

Phone: 0141 225 6999  
Textphone: 0141 241 6316